	Release 2008/12/15 : CIA-RDF	P78B03824A000500020052-3
ORIG:	CLASSIFIED MESSAGE	ROUTING
UNIT :	THE GREET	1 4
DATE: 19 JUN 70	tal menorem	3 6
TO :		
FROM:		19 Jun 70 21 51
CONF:		P INITIALS
		DEFERRED PRIORITY N X ROUTINE OPERATIONAL INITIALS IMMEDIATE
PAGE 1 OF 21		ROUTINE OPERATIONAL IMMEDIATE
		PUT70000;
ТО		CITE BY35
		7.38%
REF A:		
B:		
SUBJ: MSN 1110 PHOTOGRAI	PHIC EVALUATION INTERIM RE	EPORT (PEIR)
1. NUMERICAL SUM:		
MSN NO AND DATES: 13	110-1 20-31 MAY 70 RECOVE	RY 31 MAY 70/22307
	-2 31 MAY 70 - 8 JUN 7	
LAUNCH DATE & TIME:	20 MAY 70/2135Z	22302
VEHICLE NO: 1656	,	
CAM SYS: CR-11		
PAN CAMS: AFT LOOKING	G 322, FILM TYPES 3404/SO-	-349/3404
	G 323, FILM TYPES 3404/S0-	
DISIC UNIT: No 10	7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7	3404
STELLAR LENS: PORT F/	/2.8, 1.5 SEC, NO FILTER	
	2.8, 1.5 SEC, NO FILTER	
_	COORDINATING OFFICERS	
Part of the same and the same and	FOR SHORE	
GROREMEASING OFFICER Excluded from automatic downerading and REPRODUCTION BY C		AUTHENTICATING OFFICER
Greensing Signal Center Transmission	OTHER THAN THE ISSUING OF TO COPY — DO NOT DETAC	FICE IS PROHIBITED. Copy No.
Approved For	Release 2008/12/15 : CIA-RDF	11 - rerward with Master P78B03824A000500020052-3

X1

X1

	0052-3
CLASSIFIED MESSAGE RO	OUTING
ORIG:	4
UNIT:	5
DATE:	6
TO :	
FROM:	
	PRIORITY INITIALS
CONF: INFO: ROUTINE	OPERATIONAL INITIALS
PAGE 2 OF 21	IMMEDIATE
PAGE 2 OF 21	
TO INFO CITE	
FILM TYPE: 3401	
TERRAIN LENS: F/6.3, 1/500 SEC, FIXED W-12 FILTER	
FILM TYPE: 3400	
RECOVERY REVS: MSN 1110-1, REV 179	
-2, REV 309	
LAUNCH WINDOW: 2130Z TO 2220Z, 20 MAY 70	
2. CAM SETTINGS:	
FWD LOOKING: WRATTEN 23 A (PRIMARY)	
WRATTEN 25 (ALT)	
SLIT WIDTH POS 1 - 0.141 INS (MEASURED)	
2 - 0.167 INS (MEASURED)	
3 - 0.203 INS (MEASURED)	
·	
4 - 0.108 INS (MEASURED)	
·	

REPRODUCTION BY OTHER THAN THE ISSUING OFFICE IS PROHIBITED. Copy No.

Signal Center Transmission Copy – DO NOT DETACH – Forward with Master
Approved For Release 2008/12/15: CIA-RDP78B03824A000500020052-3

AUTHENTICATING OFFICER

TOP SECRET

RELEASING OFFICER

	Approved For Release 2008/12/15 : CIA-RDP78B0	3824	A00050002	0052-3		
Υ	CLASSIFIED MESSAGE	-		OUTING		
ORIG:	TOP SECON!	1		4		
EXT :	tot acourt	3		5 6		
DATE :						
TO :						
FROM:						
CONF:		R E C E	DEFERRED	PRIORITY	INITIALS	
INFO:	PAGE 3 OF 21	R E C E D E N C E	ROUTINE	OPERATIONAL IMMEDIATE	INITIALS	
	E	<u> </u>				
		·				
то	INFO		CITE			
	SLIT WIDTH POS 1 - 0.104 INS (MEASUR	-				
	2 - 0.132 INS (MEASUR	ED)				
	3 - 0.160 INS (MEASUR	ED)				
	4 - 0.080 INS (MEASUR	ED)				
	FAIL SAFE - 0.118 INS (MEASUR	ED)				
	3. PERFORMANCE SUM:					
	REPORTED MSN 1110 IMAGE QUALITY LESS TO	י וגאנו	FUAT OF			
	PREVIOUS 1100 SERIES MSNS AND PI SUIT RANGES FROM GOOD					
	MOSTLY IN FAIR TO POOR CATEGORY.	10 1	200R -			
	B. PET CONCURS WITH THIS BASIC ASSESSMENT, FINDING		UMBER OF			
	FACTORS CONTRIBUTING TO MEDIOCRE PERFORMANCE OF THIS MS	SN:				
	(1) SCALE: SMALL SCALE OF IMAGERY, WHEN COMPA	RED	TO EARLY			
	1100 SERIES MSNS, CONTINUES TO BE A MAJOR DETRIMENT	то	PI SUIT.			
	CMAIL COALD MIC AGAIN		PI READOUT			
	PET STRONGLY RECOMMENDS TO USE OF			•		
		-				
	REASSESS SELECTION CRITERIA WHICH PRESENTLY FAVORS	COVE	RAGE OVER			
	QUALITY FOR THE 1100 SERIES MSNS. COORDINATING OFFICERS					
	F2547 - 321 75 M F24					
	RELEASING OFFICER		AUTHENTICA:	TING OFFICER		
	REPRODUCTION BY OTHER THAN THE ISSUING OFFICE	IS P	ROHIBITED.	Copy No.		

Signal Center Transmission Copy – DO NOT DETACH – Forward with Master
Approved For Release 2008/12/15: CIA-RDP78B03824A000500020052-3

25**X**1

25X1 2^{25X}1

Approved	For Release 2008/12/15 : CIA-RDP78	B038	24A000500020	0052-3	
1i	CLASSIFIED MESSAGE	_ [_	RO	DUTING	
ORIG : UNIT : EXT : DATE :	TOPISEURET	1 2 3		5 6	
TO : FROM:					
CONF:		P R E C E	DEFERRED	PRIORITY	INITIALS
INFO:		D E N C E	ROUTINE	OPERATIONAL IMMEDIATE	INITIALS
PAGE 4 OF 21					
ТО	INFO				

- (2) CAM SYS RES PERFORMANCE: GROUND SYS TEST PERFORMANCE

 OF CR-11 MSN 1110, WAS POOREST OF ANY 1100 SERIES SYS FLOWN IN

 PAST TWO YRS. PEAK RES OF 166 L/MM FOR FWD CAM AND 120 L/MM

 FOR AFT CAM ARE EACH APPROX 20 L/MM LOWER THAN PREVIOUS 1100

 SERIES MSNS. FROM GROUND TEST DATA, IT HAD BEEN PREDICTED THAT

 MIP RATING FOR MSN 1110 WOULD NOT EXCEED 90 IF SELECTED FROM AFT

 CAM OR 100 IF SELECTED FROM FWD.
- (3) CAM FOCUS: SOME AFT CAM RESULTS, BASED ON CORN READINGS,
 WERE AS GOOD OR BETTER THAN COULD BE EXPECTED FROM ITS GROUND TEST
 DATA. FWD CAM READINGS DO NOT MEET EXPECTATIONS. LOSSES APPEAR TO
 BE CAUSED BY AN OUT OF FOCUS CONDITION. FWD IMAGERY IS MORE SEVERELY
 AFFECTED ON THE FILM'S OUTBOARD EDGE INDICATING A FILM PLANE TILT.
 ACTUAL FOCUS IS FORWARD OF FILM PLANE FOR SYSTEM, A CONDITION EFFECTED
 BY LOWER TEMPS WHICH ARE BEING ACHIEVED BY PRESENT THERMAL DESIGN.
 AS TEMP DECREASES IN THE SYS, FILM LIFT INCREASES. INCREASING FILM LIFT
 RESULTS IN GREATER FILM LIFT VARIABILITY. PET RECOMMENDS REVIEW OF
 SYS THERMAL DESIGN. IF NOT PRACTICAL TO ACHIEVE ABOVE 60 65 DEG

COORDINATING OFFICERS

RELEASING OFFICER

TOP SECRET

AUTHENTICATING OFFICER

t,	Approved For R	elease 2008/12/15 : CIA-RDP78B	038	324	400050002	200	52-3	
ı	¥	CLASSIFIED, MESSAGE		1	F	ROU	TING	
ORIG : UNIT :		TOP SECRET	1			_	4	
EXT :		TOP SECRET	3				6	
DATE :								
то :								
FROM:			L					
CONF:			PRECE		DEFERRED		PRIORITY	INITIALS
iNFO:			DENCE		ROUTINE		OPERATIONAL IMMEDIATE	INITIALS
	PAGE 5 OF 21							
-								
то	II.	IFO			CITE		· · · · · · · · · · · · · · · · · · ·	

RANGE, CAM SYS FOCUS SETTING SHOULD BE BASED ON EXPECTED RANGE
RATHER THAN AT 70 DEG NOMINAL. THE OUT OF FOCUS CONDITION APPEARS
WORSE ON 1110-1 THAN 1110-2; POSSIBLY DUE TO FILM DRYING WHICH
RESULTS IN LESS FILM LIFT VARIABILITY.

- (4) FILTER: THE ALT FILTER IN FWD CAM WAS A W-25. THE

 OP UTILIZING THIS FILTER ACHIEVED A CORN GRD IMPROVEMENT OF 1

 FT OVER THOSE CORN READINGS OBTAINED WITH PRIME FILTER, W-23.

 IT IS POSSIBLE THAT THE PRIME FILTER USAGE DETRACTED FROM PI

 INTERP. PET RECOMMENDS THAT ALL FUTURE FLIGHTS UTILIZE A W-25 AS

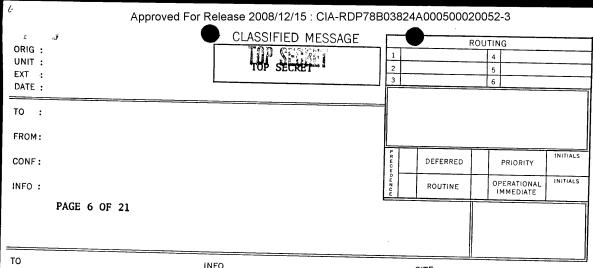
 PRIMARY FILTER FOR FWD CAMERA.
- C. THREE CORN TGTS WERE COVERED ON MSN 1110. EACH COVERAGE
 INCLUDED BOTH A 51/51 TGT AND A VERNIER TGT, WHICH IS DISPLAYED
 SPECIFICALLY FOR ASSESSING PERFORMANCE OF 1100 SERIES MSNS.
 READINGS SHOWN ARE FOR VERNIER TGT AND ARE AN AVERAGE OF 7 READERS

COORDINATING OFFICERS

TOP SECRET

RELEASING OFFICER

AUTHENTICATING OFFICER



	GI	ROUND RES IN	FT	CITE
PASS	FWD		AF	Т
	IN TRACK (CROSS TRACK	IN TRACK	CROSS TRACK
D129	9	9	7	CLOUD COVERED
D210	8	8	7.5	7.5
D226	9	9	8	7.5

4. PAN CAM ANOMALIES:

A. ANOMALY: A BAND OF DIAGONAL MARKS (ROPE APPEARANCE), 0.1
IN WIDE AND 0.3 IN FROM BINARY EDGE, RUNS CONTINUOUSLY FROM FR 23
TO FR 38 OF FWD PASS D263, WITHIN ACTIVE FORMAT. BAND RESUMES IN FR
43 AND CONTINUES THROUGH FR 92. IT DOES NOT APPEAR ON LAST FR OF
PASS D263.

CAUSE: CAUSE IS UNKNOWN; HOWEVER, NO PHYSICAL DAMAGE OR IMAGE DEG IS ASSOCIATED WITH THIS MARKING.

ACTION: NONE.

B. ANOMALY: AN INTERMITTENT, 8 IN LONG, LONGITUDINAL EMULSION
SCRATCH ORIGINATES APPROX 3 INS FROM SUPPLY END OF FR AND EXTENDS THROUGH

COORDINATING OFFICERS

TOP SECRET

AUTHENTICATING OFFICER

η	Approved For Release 2008/12/15 : CIA-RDP78B	038	324/	400050002	200	52-3	
k e 1	CLASSIFIED MESSAGE	Г	-	R	ROUT	ING	
ORIG :	TOP SECREC GILL	1				4	
UNIT :	TOP SECRET OFF	2			\rightarrow	5	
EXT : DATE :		3				6	
то :							
FROM:		L					
CONF:		5 K H C H		DEFERRED		PRIORITY	INITIALS
INFO:		DWZCH		ROUTINE		OPERATIONAL IMMEDIATE	INITIALS
PAGE	E 7 OF 21						
то	INFO			CITE			

A. O. AND INTO TAKE-UP OF ADJ FR. SCRATCH IS LOCATED IN FWD FORMAT ONE IN FROM BINARY FILM EDGE. SEVERITY OF SCRATCH DECREASES AS MSN PROGRESSES.

CAUSE: THIS ANOMALY WAS PRESENT DURING SYS TESTS, APPEARING MORE AS PRESSURE MARK THAN SCRATCH. MARK EXHIBITED "SKEWED/BRUSHING" APPEARANCE ACROSS ITS WIDTH BUT SHOWED NO EVIDENCE OF EMULSION GOUGING. SOURCE OF MARKING WAS LOCATED ON INPUT SIDE IMMEDIATELY PRIOR TO ENTERING A. O. PLATEN. EQUIP IN THIS AREA WAS PARTIALLY DISASSEMBLED AND INSPECTED BUT DIRECT CAUSE OF MARK WAS NOT DETERMINED. DURING FLT READINESS TEST, WITH FLT TAKE-UPS INSTALLED, PRESSURE MARK WAS OBSERVED TO BE LESS SEVERE, AND FURTHER DISASSEMBLY AND INSPECTION WERE CONSIDERED UNWARRANTED.

ACTION: NONE.

C. ANOMALY: PARTS OF SOME FWD OPS APPEAR UNDEREXPOSED AND OTHERS APPEAR OVEREXPOSED. (EX: PASS D186, D202, D234.)

CAUSE: THIS CONDITION OCCURRED WHERE OPS ROMNTS FOR S0-349

AND 3404 NECESSITATED A RESTRICTION IN SLIT SELECTION AND SUBSEQUENT

COORDINATING OFFICERS

RELEASING OFFICER

AUTHENTICATING OFFICER

,-	Approved For Release 2008/12/15 : CIA-RDP78B	03	824	A00050002	200	52-3	
1. 1	CLASSIFIED MESSAGE	Г		F	ROUT	TING	
ORIG: UNIT: EXT: DATE:	Top Score	2				4 5 6	
TO :							
CONF:		PRECE		DEFERRED		PRIORITY	INITIALS
INFO:		DENCE		ROUTINE		OPERATIONAL IMMEDIATE	INITIALS
PAGE	E 8 OF 21						
то	INFO			CITE	<u> </u>		

ORBITAL EXPOSURE SELECTION. SINCE ONE SLIT ON EACH CAM WAS ASSIGNED SPECIFICALLY FOR SO-349, ONLY THREE SLITS WERE AVAILABLE FOR USE ON 3404. CONSEQUENTLY, OPTIMUM EXP COULD NOT BE ACHIEVED ON ALL PASSES.

ACTION: NO FURTHER ACTION REQUIRED.

RELEASING OFFICER

D. ANOMALY: SEVERAL MINUS DENSITY DEFECTS ARE PRESENT INTER-MITTENTLY THROUGHOUT SO-349 AFT RECORD AND AT LEAST ONCE IN SO-349 FWD RECORD.

CAUSE: ANALYSIS INDICATES FOREIGN LIQUID SUBSTANCE FORMED
A DROP ON FILM. AS DROP WAS TRANSPORTED THROUGH INPUT METERING
ROLLER ASSEMBLY OR PROCESSOR ROLLER, SUBSTANCE WAS SQUEEGEED. THIS
SQUEEGEED PATTERN WAS REPEATED 4 TO 5 TIMES AT A PITCH OF SIX AND
THREE EIGHTS INS AND EITHER DESENSITIZED THE EMULSION OR PREVENTED
PENETRATION OF VISCOUS DEVELOPER, THEREBY RESULTING IN MINUS DENSITY
SPOTS. ANALYSIS CONCLUDED THIS ANOMALY IS NOT A FILM DEFECT.
MATERIAL HAD SUFFICIENT TIME TO DRY PRIOR TO BEING WRAPPED ON A
SPOOL AND PATTERN OCCURRED RANDOMLY. TIME OF OCCURRENCE CANNOT BE

COORDINATING OFFICERS

TOP SECRET

AUTHENTICATING OFFICER

	- CI 400	IFIED MESSAGE				
ORIG : UNIT : EXT : DATE :	CLASS	TOP SECRET 1 2 3	RC	5 6		
то :	7					
FROM:						
CONF:		RECEDENCE	DEFERRED	PRIORITY	INITIALS	
INFO :		E N C E	ROUTINE	OPERATIONAL IMMEDIATE	INITIALS	
PAC	GE 9 OF 21					
то	INFO		CITE			
SPE	ECIFICALLY ASCERTAINED.					
	ACTION: INVESTIGATE POSSI	BLE SOURCES OF CONTAMIN	ATION.			
ASS	SIGNED TO					
	E. ANOMALY: THREE FILM NICKS	AND A DIAGONAL CREASE	IN FRS			
25	AND 26 OF AFT PASS D187, WERE CA	AUSED WHEN FILM TRACKED	OVER			
FLA	NGE OF GUIDE ROLLER DURING POST	MSN PRESPLICE OP. A M	FG SPLICE			
IS	LOCATED IN FR 26 OF PASS D187.					
	CAUSE: DURING PRESPLICE AT	IT WAS NOTED THA	AT AFT CAM			
"B"	ROLL WAS SLIGHTLY OUT OF ROUND.	. AS MFG SPLICE IN FR 20	6 LEFT CAM			
ROL	L, SLACK SUDDENLY FORMED AND CAU	JSED FILM TO TRACK OVER	FLANGE OF			
GUI	DE ROLLER ON PRESPLICE TABLE. S	SLACK RESULTED FROM OUT	OF ROUND			
CON	DITION OF CAM ROLL AS RECEIVED B	BY				
	ACTION: NO ACTION RECOMMEN	NDED.				
	F. ANOMALY: GROUND HANDLING -	- SET OF DIAL THERMOMET	ERS WERE			
INS	TALLED IN FILM HANDLING CASES FO	OR THIS MSN. UPON ARRIV	/AL AT			2
REA	DINGS RECORDED FOR MAX TEMP REAC	CHED IN EACH SUITCASE WE	ERE:	-		
	COORDI	INATING OFFICERS				

REPRODUCTION BY OTHER THAN THE ISSUING OFFICE IS PROHIBITED. COPY NO.

Signal Center Transmission Copy – DO NOT DETACH – Forward with Master
Approved For Release 2008/12/15: CIA-RDP78B03824A000500020052-3

AUTHENTICATING OFFICER

RELEASING OFFICER

	• •	CLASSIFIE	IED MESSAGE				
orig:	al .	OLASSII II	ED MESSAGE	1) KU	OUTING 4	
UNIT:		TOAS	PERECKET	2		5	
EXT : DATE :		# V 1	Tolked.	3		6	
DAIL .							- l'
TO :							1
FROM:							
CONF:				P R E C E C E C E C E C E C E C E C E C E	DEFERRED	PRIORITY	INITIALS
INFO :				D E N C e	ROUTINE	OPERATIONAL IMMEDIATE	INITIALS
***	PAGE 10 OF 21						1
							J)
			<u> </u>				
то		INFO			CITE		
	•	1110-1	1110-2				
	FWD	114 DEG F	117 DEG F				
	AFT	102 DEG F	205 DEG F				
	THIS INDICATED HIGH TEM	MP FOR 1110-2 #	AFT CAUSED CONCE	RN AMC	ONG]	
	TEAM AT PROC SITE. COM	INCERN WAS ACCEN	NTUATED BY PRESE	NCE OF	FILM SPOTS	s,	
	FOR WHICH NO CAUSE IS I	KNOWN.					
	CAUSE: IT IS	FELT THAT REOCF	RDED TEMPS, IN PA	ARTICU	JLAR THE 20!	5	
	DEG G RECORDED ON THE	1110-2 AFT RECC	ORD ARE IN ERROR	. AND R	RESULTED FRO	.OM	
	INCORRECT HANDLING IN '	"FIRSTTIME" USF	e OF THESE DIA	LS. F	ILM HANDLI	NG	
	PROCEDURES USED ON MSN	1110 WERE IDEN	NTICAL TO THOSE	OF PRE	VIOUS CORON	NA	
	MSNS AND A/C ENVIRONMEN	NTAL RECORDINGS	3 SHOWED NO INDI	CATION	OF DEVIAT!	ION	
	FROM NOMINAL.						
	ACTION: CONDUC	CT FURTHER EVAL	L OF TEMP RECORD	ING TE	CHS. ASSIC	GNED	
	то						
	G. ANOMALY: C	CAM NO WAS IMAG	GED SEVERAL TIMES	S ON L	AST FR OF N	MOST	
	OPS. NEXT TO LAST FR	OF SOME OPS CON	ITAINS AN EXTRA	BINARY	TIME WORD	•	
		COORDINA	TING OFFICERS				

TOP SECRET

RELEASING OFFICER

25X1

25X1

<i>P</i>	Approved For Release 2008/12/15 : CIA-RDP78B	03824	1A00050002	0052-3	
1 3	CLASSIFIED MESSAGE		R	OUTING	
ORIG: UNIT: EXT:	10b-2Erchel	1 2 3		5 6	
TO :		PRE	DEFERRED	PRIORITY	INITIALS
CONF:		CEDEZCE	ROUTINE	OPERATIONAL IMMEDIATE	INITIALS
F	PAGE 11 OF 21				
то	INFO		CITE		

CAUSE: THESE CONDITIONS RESULT WHEN THE INHIBIT PULSE IS NOT LONG ENOUGH TO PREVENT DOUBLE FIRING DURING SLOW OP, IE, CREEP MODE. THIS ANOMALY CAN OCCUR FREQUENTLY ON SHUT DOWN WITH NO RESULTING DAMAGE.

ACTION: NO ACTION RECOMMENDED.

H. ANOMALY: RANDOM, INTERMITTENT, PLUS DENSITY SPOTS ARE PRESENT THROUGHOUT 1110-2 ONLY. THEY ARE PRESENT ON BOTH FWD AND AFT CAM RECORDS AS WELLAS BOTH 3404 AND SO-349 EMULSIONS. SIZE OF SPOTS VARIES WITH LARGEST APPROX FIVE TEN-THOUSANDTHS IN. DEGRADATION ATTRIBUTABLE TO THESE SPOTS EXPECTED TO BE MINIMAL.

ESTABLISHED THAT PLUS DENSITY SPOTS CAUSE: ANALYSIS AT ARE SILVER. THEY HAVE A FUZZY, UNSHARP BOUNDARY, AND OCCUR BOTH IN AND OUT OF FORMAT AREA WITH SIGNIFICANTLY HIGHER FREQUENCY IN LAST FEW INS AT SUPPLY END OF FR. . SOURCE OF SENSITIZATION WHICH RESULTED IN THESE SPOTS COULD NOT BE ESTABLISHED, BUT IT IS SUSPECTED TO HAVE OCCURRED IN FLT.

COORDINATING OFFICERS

TOP SECRET

AUTHENTICATING OFFICER

RELEASING OFFICER

		telease 2008/12/15 : CIA-RDP7 CLASSIFIED MESSAGE		4				
1			٦h		K	OUTI	- 	
ORIG:		TOP SERVET	1 2			- -		
EXT :		Dan O Lusse g	3			1		
DATE :								
TO :								
FROM:			<u></u>	-				INITIALS
CONF:			R E C E D E		DEFERRED		PRIORITY	
INFO:			D E N C E		ROUTINE		OPERATIONAL IMMEDIATE	INITIALS
	PAGE 12 OF 21				-			
то	11	NFO			CITE			
	ACTION: ATTEMPT	TO DETERMINE CAUSE. ASSI	GNED 7	O				
	I. ANOMALY: IMAGERY	FROM BOTH CAMS DISPLAYS	ANI OUT	. 0	e rocue			
	I. ANOMALI: IMAGERI	FROM BOTH CAMS DISPLATS	AIN OU	ı Oı	rucus			
	CONDITION.							

25**X**1

APPROX 70 DEG F. ACTUAL MSN TEMPS WERE LOWER, IE, APPROX 60 DEG F.,
RESULTING IN HIGHER THAN EXPECTED DYNAMIC FILM LIFT AND VARIABILITY
DURING EXPOSURE. IN ADDITION, NONUNIFORMITY ACROSS FORMAT IS ATTRIBUTED
TO HIGHER THAN NORMAL FILM TILT, CAUSE OF WHICH IS UNKNOWN. THUS,

ONE EDGE OF FORMAT IS AS SHARP AS EXPECTED FOR THESE UNITS AT THESE

TEMPS, WHILE REST OF FORMAT IS MORE SERIOUSLY DEGRADED.

ACTION: INSTRUMENTS WILL BE SHIMMED FOR A TEMP OF 60 DEG F.,
ANTICIPATED FLT ENVIRONMENT. IN ADDITION, CONDUCT AMBIENT AGT TESTS
ON REMAINING SYS. UTILIZING THESE DATA, ADJUST INSTRUMENTS TO OBTAIN
MIN FILM TILT. ASSIGNED TO

J. CHARACTERISTIC ANOMALIES HAVING A MINOR AFFECT ON PERFORMANCE:

TOP SECRET

AUTHENTICATING OFFICER

RELEASING OFFICER

REPRODUCTION BY OTHER THAN THE ISSUING OFFICE IS PROHIBITED. Copy No.

Signal Center Transmission Copy – DO NOT DETACH – Forward with Master
Approved For Release 2008/12/15: CIA-RDP78B03824A000500020052-3

1.	Approved For R	elease 2008/12/15 : CIA-RDP78E	303	824	A00050002	200	52-3	
1 .		CLASSIFIED MESSAGE		-(R	OUT	ING	
ORIG :		Tan Gear-	1				4	
UNIT :		Pur Secure	3		···	_	6	
DATE :	•		Г	<u> </u>				
TO :								
FROM:								
CONF:			P R E C E		DEFERRED		PRIORITY	INITIALS
INFO :			0 E Z C E		ROUTINE		OPERATIONAL IMMEDIATE	INITIALS
P	PAGE 13 OF 21							
						ļ		
TO	IN.	NFO			CITE			

(1) ANOMALY: OUT OF FOCUS AREAS PRESENT ON FRS 3 AND 4
OF FWD CAM OF SOME PASSES AND ON FRS 4 AND 5 OF AFT CAM.

CAUSE: AFT CAM HAS SIT MARKS ON FRS 4 AND 5 SIMILAR TO THOSE WHICH OCCURRED DURING MSN 1109/CR-9 FWD.

ACTION: NO ACTION RECOMMENDED.

(2) ANOMALY: AN EQUIPMENT IMAGE ASSOCIATED FOG PATTERN IS PRESENT ON FOURTH FR FROM END OF SOME FWD PASSES.

CAUSE: FOG ON FOURTH FR WAS CAUSED BY LIGHT LEAK AT A CORNER OF FWD LIGHT SHIELD ASSEMBLY. DENSITY IS CONSIDERED MINOR AND NO IMAGE DEGRADATION WAS NOTED.

ACTION: NO ACTION RECOMMENDED.

(3) ANOMALY: A MINOR CHARACTERISTIC FOG PATTERN DESCRIBED
AS "SPLASHING" IS PRESENT ON FIRST FR OF MOST OPS.

CAUSE: CHARACTERISTIC OF CR SYSTEM.

ACTION: NONE.

5. DISIC CAM PERFORMANCE: LAST ACQUISITION OBTAINED FROM INDEX CAM

TOP SECRET

COORDINATING OFFICERS

AUTHENTICATING OFFICER

Approved F	or Release 2008/12/15 : CIA-RDP78	B03824	IA00050002	20052-3	
A	CLASSIFIED MESSAGE		R	OUTING	
ORIG:	_	1		4	
UNIT : EXT :	TOP SECRET	3		6	
DATE:					
то :					
FROM:					
CONF:		P R E C	DEFERRED	PRIORITY	INITIALS
INFO:		D # 70 C E	ROUTINE	OPERATIONA IMMEDIATE	LINITIALS
PAGE 14 OF 21					
ТО	INFO		CITE		

IS FR 55 OF PASS 301. LAST STELLAR ACQUISITION IS PORT 58 OF PASS 304. POINT-TYPE STAR IMAGES WERE RECORDED BY BOTH STELLAR CAMS.

APPROX 12-20 STAR IMAGES WERE RECORDED ON PORT AND STB FORMATS. INDEX IMAGE QUALITY, WHERE NOT DEGRADED BY STATIC FOGGING, IS GOOD.

6. DISIC ANOMALIES:

A. ANOMALY: MULTIPLE, CORONA, DENDRITIC, AND GRID PLATE STATIC DISCHARGE IN PORT AND STB FORMATS IS PRESENT INTERMITTENTLY THROUGH MSN. STATIC DISCHARGES ARE MORE PROMINENT ON 1110-2 AND HEAVIER ON STB THAN ON PORT.

CAUSE: AN EMULSION BUILDUP ON THE RESEAU GRID LINES INCREASES
TO APOINT AT WHICH STATIC FROM GRID LINES DISCHARGES IN A TYPICAL
GRID-LIKE FASHION. CORONA DISCHARGES ARE PRESSURE SENSITIVE AND MORE
VISIBLE DURING INDEPENDENT MODE WITH PMU OFF.

ACTION: CONDUCT AN EVAL OF PRESENT PMU CONFIG TO DETERMINE POSSIBILITY OF PROVIDING PMU PRESSURE DURING DISIC INDEPENDENT OPS.

ASSIGNED	TO	

TOP SECRET

RELEASING OFFICER

ANTHENTICATING OFFICED

,	Approved For Release 2008	3/12/15 : CIA-RDP78B03	3824A	00050002	005	2-3	
	. CLASSI	FIED MESSAGE	-	R	UTUC	NG	
ORIG:	<u> </u>	P. Ski			4		
UNIT : EXT :	iror	SBCRITIES 2			5		
DATE:							
TO :							
FROM:							
CONF:		PRECE		DEFERRED		PRIORITY	INITIALS
INFO:		DENCE		ROUTINE		OPERATIONAL IMMEDIATE	INITIALS
	PAGE 15 OF 21						
то	INFO	· · · · · · · · · · · · · · · · · · ·	C	 ITE			

B. ANOMALY: FIVE FRS DID NOT HAVE BINARY TIME WORD IMAGED, (EX: PASS 168, FR 28).

CAUSE: ADJ TIME WORDS WERE SHARP, THEREFORE PROBLEM IS MORE LIKELY ELECTRICAL THAN MECHANICAL AND ABSENCE OF TIME WORD MAY HAVE BEEN DUE TO A MISSED DATA REQUEST PULSE.

ACTION: NO ACTION RECOMMENDED.

C. ANOMALY: MSN 1110 INDEX FILM IS DEGRADED BY BAND OF LINES

AND ASSOCIATED STATIC WHICH ARE MOST OBVIOUS IN CTR OF FORMAT. BAND

APPEARS AS MINOR DEGRADATION AT BEGINNING OF MSN AND PROGRESSIVELY

WORSENS TOWARD END OF MSN WHERE FRS IN INDEPENDENT MODE ARE 80 PCT

DEGRADED. THERE IS EVIDENCE ON PAD-LOADED PORTION OF A RUBBING

INTERFERENCE OVER APPROX THREE-QUARTERS OF FORMAT. MAJOR LINES APPEAR

AT 2.5MM SPACING AND ARE COINCIDENT WITH RESEAU LINES. HOWEVER, MANY

MINOR LINES AN BANDS WITHIN MAJOR BAND ARE NOT COINCIDENT WITH RESEAU

LINES. SOME EVIDENCE OF EMULSION RUB APPEARS COINCIDENT WITH RESEAU

LINES IN INNER FR AREAS. FIVE BLANK FRS IN PASS 9 SHOW BAND OF LINES

AS VERY CONTINUOUS BAND WITH LITTLE, IF ANY, EVIDENCE OF METERING.

RELEASING OFFICER

AUTHENTICATING OFFICER

	Approved For R	elease 2008/12/15 : CIA-RDP78	B03	824	A00050002	00	52-3	
к 1		CLASSIFIED MESSAGE		-	RO	OUT	ING	
ORIG : UNIT : EXT : DATE :		TOPSECRET	3			1	4 5 6	
TO :	The second secon							
CONF:			PRECE		DEFERRED		PRIORITY	INITIALS
INFO:	DAGE 16 OF 21		10,500		ROUTINE		OPERATIONAL IMMEDIATE	INITIALS
	PAGE 16 OF 21		<u> </u>					
то		NFO			CITE			

PRESSURE CHANGES DUE TO PMU TURN-ON AND -OFF ARE STRIKINGLY EVIDENT IN THAT CORONA MARKING IN INDEPENDENT MODE IS MUCH HEAVIER THAN IN DEPENDENT MODE.

CAUSE: FOLLOWING CONDITIONS COULD HAVE CAUSED ANOMALY:

- (1) MIS-THREADING OF FILM PATH IN SUPPLY CASSETTE, BODY ASSEMBLY OR EXIT HOUSING, (2) OUT OF TIMING OF PLATEN WITH RESPECT TO FILM METERING CYCLE, (3) FAULTY SKEW ROLLER IN EXIT BOX. THE FOLLOWING OBSERVATIONS ARE MADE FROM AVAILABLE DATA: (1) CUT AND SPLICE DEVICE AND TAKE-UP CASSETTES CAN BE ELIMINATED AS CAUSES SINCE, AT TIME OF CUT AND SPLICE, MARKING CONTINUED AND WAS UNCHANGED THROUGH SPLICE.
- (2) CENTRAL MARKING AREA SHIFTS SLIGHTLY AND HEAVY DENSTTY AREAS
 FAVOR SIDE OPPOSITE SLP, A CONDITION WHICH MIGHT BE EXPECTED SINCE
 SKEW ROLLER IS PRESET IN SUCH A WAY AS TO LOAD SIDE OPPOSITE SLP.
- (3) FORMAT CORNERS ARE SHARP AND FLAT, AND SLP REGISTERS CORRECTLY.

 PRELIMINARY EVIDENCE FROM CLEAT INDICATES FILM FLATNESS AND CALIBRATION

 WERE MAINTAINED IN MSN. THEREFORE, IT IS UNLIKELY THAT A PLATEN PAD

COORDINATING OFFICERS

TOP SECRET

AUTHENTICATING OFFICER

AUTHENTICATING OFFICER

				_			
1	Approved For R	elease 2008/12/15 : CIA-RDP7	8B03	824	A00050002	0052-3	
		RO	ROUTING				
ORIG :	,	CLASSIFIED MESSAGE				4	
UNIT :		Top seedit	2	L		5	
EXT :			┚╠╩	<u> </u>		6	
DATE :							
TO :							1
			1	*			
FROM:			P R E C		DEFERRED	PRIORITY	INITIALS
CONF:			D E			OPERATIONAL	INITIALS
INFO:			Z C E		ROUTINE	IMMEDIATE	
	PAGE 17 OF 21						
					ŀ		
							1
		NFO			CITE		
	DRODIEM WAS CAUSE AITHOU	JGH A ROUGH PAD EDGE CANNOT	r RF				
	PROBLEM WAS CAUSE, ALTHOU	JGH A ROUGH FAD LDGL CAMO	DL		*		
	ELIMINATED AS A POSSIBILI	ITY. (4) NO EVIDENCE OF S	SIMIL	AR-	TYPE		
	PROBLEM ON STELLAR MATER	IAL. THIS REDUCES, BUT DOI	es no	T E	LIMINATE		
	POSSIBILITY OF A SUPPLY O	CASSETTE PROBLEM.					
	ACTION: (1) ENDI	EAVOR TO DUPLICATE MARKING	s as	THE	Υ		

APPEARED ON PREFLIGHT PORTION OF FILM IN AN EXISTING DISIC SYS.

(2) IF REQUIRED, CHANGE DISIC ASSEMBLY AND TEST PROCEDURE.

ASSIGNED TO

- 7. REVIEW OF SO-349 (3414) AND 3404 ON'S INDICATES NO APPARENT DIFFERENCE IN IMAGE QUALITY. HOWEVER, ABILITY TO DECREASE SLIT WIDTHS AND THEREBY DECREASE SMEAR COMPONENTS, FAVOR FUTURE USAGE OF 3414. PET RECOMMENDS USE OF 3414 IN FUTURE FLTS. IT IS ALSO RECOMMENDED THAT PORTION OF MSN 1111-1 BE PROCESSED NORMALLY (NOT FORCED DEVELOPMENT) AND COMPARED WITH REMAINDER OF 1111-1 TO DETERMINE BEST PROCESSING METHOD FOR MSN 1111-2 AND SUBSEQUENT MSNS.
- 8. MSN 1111: MSN 1111 PLANNING WAS DISCUSSED AND DECISION CONCERNING

COORDINATING OFFICERS TOP SECRET

RELEASING OFFICER

REPRODUCTION BY OTHER THAN THE ISSUING OFFICE IS PROHIBITED. Copy No. Signal Center Transmission Copy - DO NOT DETACH - Forward with Master Approved For Release 2008/12/15 : CIA-RDP78B03824A000500020052-3

7	_	$\overline{\mathbf{v}}$	

Fic		Арр	roved Fo	or Relea	se 2008	/12/15	: CIA-RDF	78B03	824A00	0500020	052-3	
•	a				CLASSIF	FIED N	1ESSAGE	[ROL	JTING	
ORIG :					TH.	AB 412	ากสิต	1 2			5	
UNIT :						op sk	Other,)	3			6	
DATE :												
то :												
FROM:								L P			<u> </u>	INITIALS
CONF:								RECEDENCE	DEI	FERRED	PRIORITY	
INFO :								E N C E	RO	UTINE	OPERATIONAL IMMEDIATE	INITIALS
	PAGE 18	3 OF 21							-			
	· · · · · · · · · · · · · · · · · · ·						-					
ТО				INFO	¬				CITE			
		ING OF PE					ED UNTIL					
	GROUND	TEST PER	FORMANC	E OF SY	S CR-1	2, WH1	CH WILL	BE FLO	WN ON			
	MSN 111	1, INDICA	ATES IT	IS COM	1PARABL	E TO 1	THAT OF C	R-11,	WHICH V	WAS	•	
	FLOWN C	N MSN 11	10. KN	IOWN AUC	CLIMA'	TOLOGI	CAL PARA	METERS	AND AS	SSUMED		
	HIGH MS	SN ALT WI	LL.LIKE	LY RESU	JLT IN	SIMILA	R PHOTO	INTERP	COMMEN	NTS		
	FOR MSN	1110 AN	D 1111.	AN MI	P OF 9	0-100	IS ANTIC	IPATED	. FOLI	LOWING		
	DATA SU	IM FOR MSI	NS 1101	1111	IS PR	OVIDE	FOR INF	O PURP	OSES:			
	MSN NO/ SYS NO	LAUNCH DATE	INST/ LOOK	LENS TYPE	FIL	PEAK RES	FIG OF MERIT	ALT NM	MIP PRED	MIP -1/-2	_	
	1101/	9-15-67	302A	1	W-21	125	60	85	70	N/R*		
	CR-1		303F	1	W-23A	122	95	85	85	85-1		
	1102/ CR-2	12-9-67	304A	1	W-21	122	115	87	90	N/R		
	OK Z	12 5 07								·		
			305F	2	W-25	137	130	87	95	90-1		
	1103/											
	CR-3	5-1-68	306A	1	W-21	136	125	88	85	N/R		
			307F	2	W-25	147	125	88	95	90-1		
					COORDI	NATING O	FFICERS					
	051515111	255125-			TOP	SECRET						
	RELEASING		UCTION	BY OTH	ER THAI	V THE	ISSUING (DEFICE	IS PR∩		Copy No.	
	Sign	al Center	Transm	ission C	ору —	DO N	OT DETA	CH -	Forware	d with M	aster	
		Арр	roved Fo	<u>or Rele</u> a	<u>se 200</u> 8	<u>/12/1</u> 5	: CIA-RDF	78B03	8 <u>24</u> A00	05000200	052-3	

•		App [,]	roved For	r Release	e 2008/1	12/15 : /	CIA-RDP78	8B0382	24A000!	5000200	J52-3	
•	h						ESSAGE	_ [ROUT	TING	
ORIG : UNIT : EXT : DATE :					刊	eeçre	R. L.	1 2 3			5 6	
TO :												
FROM:								P			1	INITIALS
CONF:								PRECEDENCE	DEFER	RED	PRIORITY	INITIALS
INFO :								E N C E	ROUT	INE	OPERATIONAL IMMEDIATE	INITIALS
	PAGE 1	19 OF 21										
ТО	MSN NO SYS NO		INST/ LOOK	INFO LENS TYPE	FIL	PEAK RES	FIG OF MERIT		CITE MIP PRED	MIP -1/-2		
	1104/ CR-4	8-7-68	308A	2	W-21	. 141	145	87	110	N/R		
			309F	3	W-25	172	165	87	110	115-1		
	1105/ CR-5	11-3-68	310A	1	W-21		130	85	95	95-1	ı	
			311F	3	W-25	187	180	85	105	N/R		
	1106/ CR-6	2-5-69	312A	2	W-21	130	125	83	100	N/R		
			313F	3	₩-23	184	175	83	110	110-	1	
	1107/ CR-7	7-24-69	314A	2	W-21	141	135	99	95	95-: 9 5 -:		
			315F	3	W-23	207	185	99	105	FLD		
	1108/ CR-9	12-4-69	316A	1	W-21	132	130	82/100	95	N/R	ŧ	
			317F	3	W-25	188		82/100		105 100	5-1	
					COORDINA	ATING OFFIC	CERS	_				
				1				I				

TOP SECRET AUTHENTICATING OFFICER REPRODUCTION BY OTHER THAN THE ISSUING OFFICE IS PROHIBITED. Copy No. Signal Center Transmission Copy – DO NOT DETACH – Forward with Master
Approved For Release 2008/12/15: CIA-RDP78B03824A000500020052-3

RELEASING OFFICER

INFO: PAGE 20 OF 21	
TO : FROM: CONF: PAGE 20 OF 21 TO SYS NO DATE LOOK TYPE RES MERIT NM PRED -1/-2 1109/ CR-10 3-4-70 320A 3 W-23A 158 150 94 100 N/R 321F 3 W-25 202 190 94 110 110-1 1100-2 1110/ CR-11 5-20-70 322A 2 W-21 120 120 20 100 100 N/R	
TO : FROM: CONF: INFO: PAGE 20 OF 21 TO INFO INFO INFO INFO INFO INFO INFO CITE MSN NO/ LAUNCH INST/ LENS FIL PEAK FIG OF ALT MIP MIP MIP NOW PRED -1/-2 1109/ CR-10 3-4-70 320A 3 W-23A 158 150 94 100 N/R 321F 3 W-25 202 190 94 110 110-1 100-2 1110/ CR-11 5-20-70 322A 2 W-21 130 100 100 100 100-1	
FROM: CONF: INFO: PAGE 20 OF 21 INFO INFO INFO INFO INFO INFO CITE MSN NO/ LAUNCH INST/ LENS FIL PEAK FIG OF ALT MIP MIP MIP SYS NO DATE LOOK TYPE RES MERIT NM PRED -1/-2 1109/ CR-10 3-4-70 320A 3 W-23A 158 150 94 100 N/R 321F 3 W-25 202 190 94 110 110-1 100-2	
CONF: INFO: PAGE 20 OF 21	
PAGE 20 OF 21 TO INFO CITE MSN NO/ LAUNCH INST/ LENS FIL PEAK FIG OF ALT MIP MIP MIP SYS NO DATE LOOK TYPE RES MERIT NM PRED -1/-2 1109/ CR-10 3-4-70 320A 3 W-23A 158 150 94 100 N/R 321F 3 W-25 202 190 94 110 110-1 1100-2	
PAGE 20 OF 21 TO INFO CITE MSN NO/ LAUNCH INST/ LENS FIL PEAK FIG OF ALT MIP MIP MIP SYS NO DATE LOOK TYPE RES MERIT NM PRED -1/-2 1109/ CR-10 3-4-70 320A 3 W-23A 158 150 94 100 N/R 321F 3 W-25 202 190 94 110 110-1 1100-2	INITIALS
TO INFO CITE MSN NO/ LAUNCH INST/ LENS FIL PEAK FIG OF ALT MIP MIP	NITIALS
MSN NO/ LAUNCH INST/ LENS FIL PEAK FIG OF ALT MIP	
MSN NO/ LAUNCH INST/ LENS FIL PEAK FIG OF ALT MIP	
11109/ CR-10 3-4-70 320A 3 W-23A 158 150 94 100 N/R 321F 3 W-25 202 190 94 110 110-1 1110/ CR-11 5-20-70 322A 2 W-21 120 120	
1110/ CR-11 5-20-70 322A 2 W-21 120 120 22	
CR-11 5-20-70 322A 2 W-21 120 120	
323F 3 W-23 166 155 92 100 90-1 92 95-2	
1111/	
CR-12 324A 2 W-21 118 115 95(3) 90	
325F 3 W-25 175 160 95(3) 100	
N/R - NO RATING (RATINGS BY ARE FOR BEST CAM ONLY).	
(1) - FIG OF MERIT IS A COMBINED MEASURE OF DEPTH OF FOCUS AND RES	
USED IN MAKING ORBITAL PREDICTIONS.	

(2) - THE MIP PRED COMBINES FIG OF MERIT AND SCALE IN PROJECTING

COORDINATING OFFICERS

TOP SECRET

REPRODUCTION BY OTHER THAN THE ISSUING OFFICE IS PROHIBITED. Copy No. Signal Center Transmission Copy – DO NOT DETACH – Forward with Master

Approved For Release 2008/12/15: CIA-RDP78B03824A000500020052-3

AUTHENTICATING OFFICER

A BEST MSN POTENTIAL.

RELEASING OFFICER

- 3	Approved For F	Release 2008/12/15 : CIA-RDP78	8B0382	24A00050002	20052-3	
ORIG : UNIT : EXT : DATE :		CLASSIFIED MESSAGE	1 2 3		DUTING 4 5 6	
FROM:						-
CONF:			PRECEO	DEFERRED	PRIORITY	INITIALS
INFO:	PAGE 21 OF 21		E N C E	ROUTINE	OPERATIONAL IMMEDIATE	INITIALS
ТО		NFO		CITE		
	(3) - AN ALT OF 95NM HAS I	BEEN ASSUMED BASED ON RECEN	IT ORB	ΙΤ		
		END OF MESSAGE				

TOP SECRET

HER THAN THE ISSUING OFFI

Copy - DO NOT DETACH

Approved For Release 2008/12/15: CIA-RDP78B03824A000500020052-3

25X1